

REMARKS

Claims 1-15 were pending in the present application. Claims 1 and 10 have been amended. New claim 16 has been added, leaving claims 1-16 pending upon entry of the present amendments. The claims have been amended as explained below. No new matter has been introduced by these amendments. Allowance of the claims is respectfully requested in view of the above amendments and following remarks.

Amendments to, cancellation of, and additions to, the claims, as set forth above, are made in order to streamline prosecution in this case by limiting examination and argument to certain claimed embodiments that presently are considered to be of immediate commercial significance. Amendment or cancellation of the claims is not in any manner intended to, and should not be construed to, waive Applicants' right in the future to seek such unamended or cancelled subject matter, or similar matter (whether in equivalent, broader, or narrower form) in the present application, and any continuation, divisional, continuation-in-part, RCE, or any other application claiming priority to or through the present application, nor in any manner to indicate an intention, expressed or implied, to surrender any equivalent to the claims as pending after such amendments or cancellations.

Claim 1 has been amended to recite that the aqueous pigment paste "is stable, transportable and storable for up to three months," as supported at least on page 2, lines 18 to 28. Claim 1 has been further amended to recite that the aqueous pigment paste is free from binders, "including" grinding resins "used for dispersing pigments, wherein the aqueous pigment paste is usable for producing an aqueous coating material by mixing the aqueous pigment paste with at least one aqueous mixing varnish comprising at least one water-soluble, water-dispersible, or water-soluble and water-dispersible binder." Support for this amendment can be found at least on page 7, line 20, to page 8, line 3, of the original specification, as well as at page 4, line 26, to page 5, line 6.

The amendment to claim 11 is merely intended to clarify the original wording. New claim 1 combines the limitations of claim 1, claim 3, and claim 7.

In the Advisory Action, the Examiner states that the Applicants argue that Sapper uses acrylate polymer as a grinding resin because other resins cited by Applicants taught that such polymer can be used as a grinding agent. The Examiner states that Sapper does not teach the acrylate polymer is a grinding resin. It is used to adjust viscosity and stabilize coating formulations.

First, Applicants respectfully submit that irrespective of whether the acrylate polymer of Sapper is a grinding pigment or not, it is a binder (and not a nonassociative thickener) that is excluded from the present claims. This has been clarified by the amendment to claim 1, which requires the absence of binders “including” grinding resins. Furthermore, Sapper not only uses an acrylate polymer with the aluminum metal pigment, but as shown in the Table in column 4 of Sapper, also a polyurethane binder, an OH-containing resin polyester, and a melamine resin, all binders. Thus, the present invention is clearly an improvement over the composition of Sapper, which teaches away from the present invention.

Second, the term “grinding pigment” is not a process limitation but rather a compositional limitation. Therefore, the composition does not require grinding, although a metal pigment paste would normally require grinding. One of ordinary skill in the art would know that grinding pigments can be used for dispersing pigments irrespective of grinding, but it can also be used for a dispersing effect in combination with grinding. This has been clarified by the above amendment which recites that the grinding resin is “used for dispersing pigments.” In any case, the most likely reason Sapper does not mention grinding or its equivalent is because Sapper does not involve a paste with a relatively high content of metal pigment. It is further noted that Bergfried, which unlike Sapper, does involve pastes also uses milling or its equivalent to divide pigment agglomerates (page 4, lines 13-22).

Third, Sapper is not directed to a paste, certainly not a paste of a metal pigment, but rather the addition of a polymer dispersant additive to a coating material that in the examples contains 0.2 percent aluminum pigment. Thus, Sapper does not remotely teach or suggest a metal pigment paste that solves the problem of long term stability in which binders, including grinding pigments, are excluded.

The Examiner also states that “Applicant argues that the unexpected amount of pigment in the composition is not disclosed by the prior art,” but responds by stating that

“In the instant case, the pigment amount is determined by the desired metallic effect and would have been obvious to one of ordinary skill in the art to utilize a suitable amount of metallic pigment in the coating composition.”

It is respectfully submitted that the Examiner has not understood and responded to Applicants' arguments in this regard. As stated in Applicants' amendment of June 17, 2008, on page 10, first full paragraph, one does not coat using a paste, nor with a coating containing 22% of aluminum pigment as in the Example on page 19, line 22, to page 20, line 6, but rather the paste is greatly diluted in the final coating composition, as indicated in claim 13 or the example on page 20 of the present application, in which 3% of the metal pigment was contained in the coating material.

Furthermore, the Applicants are not arguing merely that the amount of metal pigment in the paste is novel and unexpected but rather the stability obtained for the novel composition is surprising, which is further evident by comparing the demonstrated stabilities of only 10 hours achieved by Bergfried for a paste comprising tin oxide.

Furthermore, the metal oxides of Bergfried are plainly very different materials than aluminum or other metal pigments, as discussed in Applicants' amendment of June 20, 2008 on page 9, second full paragraph, to page 10, second paragraph.

Furthermore, Bergfried requires 40-60% of an “electrically conductive pigment based on metal oxides,” whereas the present invention requires 15 to 40 percent of the metal pigment, preferably 22%. Applicants would be agreeable to claiming less than 40 weight percent of the metal pigment if the Examiner wishes to add still an additional distinction to the claims.

The Examiner also states in the Advisory Action:

The Examiner respectfully submits that Sapper discloses a composition comprising pigment, thickener, nonionic surfactant, amine, and water. The composition is a pigment paste.

Applicants respectfully disagree. In fact, the whole purpose of Sapper is to avoid the formation of an unstable paint. In column 4, Sapper provides two examples of metallic paints containing 0.2 percent aluminum pigment or 4 percent blue and mica pigment, which has an initial viscosity of 81 mPa · sec. Comparing such a viscosity to known materials, it can be easily determined that this is not a paste. For example, the viscosities of castrol oil, honey, an ketchup are, respectively, 1000, 10000, and 50000

mPa · sec. Thus, while more viscous than water, the composition of Sapper does not resemble a paste. Furthermore, “paints” and “coating materials” in general are not referred to as pastes for good reason, that being that they are not pastes by common usage of the word. It is again noted that Applicants are not using the presently claimed paste as paint or coating material but a storage stable intermediate for use in making a coating material.

The Examiner states that “Bergfried is used to show that pigment composition can be free of binder.” Applicants submit, however, that Bergfried does indeed use a binder. As indicated in claim 1, the composition of Bergfried includes, not only a polyacrylate thickener in the amount of 0 to 2.0%, but also 2 to 4.9 percent of a terpolymeric, anionic polyacrylate which satisfies the definition of a binder. (It is noted that the present invention requires the thickener to be used in an amount less than 1 percent, whereas Bergfried requires 2 to 4.9% of the terpolymer binder as well as 0 to 2.0% of the thickener.)

Furthermore, Bergfried states, on page 2, as follow:

Typical dispersing additives for aqueous systems are surface active, anionic, cationic or nonionic substances, which have a low molecular weight... The use of polyacrylates of low molecular weight as dispersants for pigments in aqueous coating is also known.... However, adequate stabilization of the aqueous pigment concentrates cannot be achieved according to this state of the art.

Thus, Bergfried teaches away from the present invention, to the extent it might be relevant to metal pigments, by specifically stating that a polyacrylate dispersant is not sufficient, but that a certain binder is also required. Accordingly, Bergfried requires a terpolymer which is used as a binder in addition to (and in substantially different amounts from) the polyacrylate thickener mentioned in Bergfried and the nonassociative thickener in the present composition. In fact, based on the experimental results shown in the table on page 8 of Bergfried, a certain type of binder (binder 1 or 3) is required, compared to formulations 1, 3, and 6. Finally, unless this binder is used, the compositions are not stable after 1 hour, whereas with the binder required by Bergfried and excluded by the present invention, the stability is shown to be achieved for 10 hours, as compared to 3 months achieved using in the present invention, exemplified on page 2, and required by present claim 1.

CONCLUSION

Applicants respectfully submit that the Application and pending claims are patentable in view of the foregoing remarks. A Notice of Allowance is respectfully requested. As always, the Examiner is encouraged to contact the Undersigned by telephone if direct conversation would be helpful.

Respectfully Submitted,

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Date: Friday, September 26, 2008
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